

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated June 6, 2006 has been received and its contents carefully reviewed.

Claims 1, 9, 14, and 18 are hereby amended and claims 6, 11, 15, and 19 are hereby canceled. Accordingly, claims 1-5, 7-10, 12-14, 16-18, and 20 are currently pending. Reexamination and reconsideration of the pending claims is respectfully requested.

The Office Action rejects claims 1-20 under 35 U.S.C. §103(a) as being obvious over U.S. Patent Application Publication No. 2002/0037058 to *Birru* (hereinafter "*Birru*"). The rejection is respectfully traversed.

As required in Chapter 2143.03 of the M.P.E.P., in order to establish *prima facie* obviousness of the claimed invention, all the limitations must be taught or suggested by the prior art. For the reasons as discussed below, *Birru* does not at least disclose the features of independent claims 1, 9, 14, and 18.

For instance, independent claim 1 recites, *inter alia*, "the time domain equalizer makes coefficient renewal by using one of signals from the frequency domain equalizer and the noise removing part and an error fed back from the error providing part, to compensate the signal for a signal distortion caused by fast fading." Independent claim 9 recites, *inter alia*, "the time domain equalizer makes coefficient renewal by using a signal from the noise removing part and an error fed back from the error providing part, to compensate the signal for a signal distortion caused by fast fading." Independent claim 14 recites, *inter alia*, "the time domain equalizer makes coefficient renewal by using a signal from the frequency domain equalizer and an error fed back from the error providing part, to compensate the signal for a signal distortion caused by fast fading." Independent claim 18 recites, *inter alia*, "the time domain equalizer makes coefficient renewal by using a signal from the frequency domain equalizer and an error fed back from the error providing part, to compensate the signal for a signal distortion caused by fast fading."

The Office Action refers to *Birru*'s Fig. 12, and at page 2, associates the least mean square (LMS) adaptive transversal filter 1204 with the claimed time domain equalizer. However, the LMS filter 1204 does not operate in a manner as the claimed time domain equalizer.

Specifically, in *Birru*, the role of the LMS filter is to determine the least mean squares of an error signal, which basically is a difference between a desired and actual signal. Nowhere does *Birru* disclose or even suggest that the LMS filter makes coefficient renewal by using one of signals from the frequency domain equalizer and the noise removal part and an error fed back from the error providing part, as recited in claim 1. Moreover, *Birru* does not disclose or suggest the above-mentioned features of claims 9, 14, and 18 for similar reasons.

Furthermore, the LMS filter 1204 does not operate in the time domain. In fact, as shown in Fig. 12, the LMS 1204 operates in the frequency domain (i.e., receives frequency domain data from the block delay 1201 and the FFT 1203, and outputs frequency domain data, i.e., LMS error data, which is converted to time domain by the IFFT 1205). See also paragraph [0007].

Lastly, the Office Action on pages 2-3 acknowledges that *Birru* does not disclose a noise removing part. However, the Office Action takes "official notice" that noise removing part is well known. Applicants respectfully request that a reference be applied that discloses the noise removing part that operates in a manner as claimed. For instance, independent claim 9 recites, *inter alia*, "the time domain equalizer coefficient makes renewal by using a signal from the noise removing part and an error fed back from the error providing part, to compensate the signal for a signal distortion caused by fast fading." Further, the Office Action takes "official notice" on the features recited in claims 7, 12, 16, and 20. Again, Applicants respectfully request that a reference be applied that discloses the features of claims 7, 12, 16, and 20 as claimed.

In summary, for at least the reasons discussed above, independent claims 1, 9, 14, and 18 recite patentable subject matter. Claims 2-5, 7-8, 10, 12-13, 16-17, and 20 are at least allowable by virtue of their dependency on the respective claims 1, 9, 14, and 18.

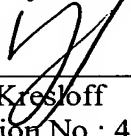
Applicants believe the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

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Attachments